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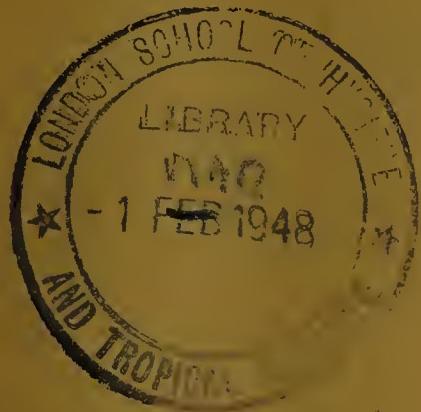


TANGANYIKA TERRITORY

Annual Report of the Medical Department

for the year ended 31st December

1945



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TANGANYIKA TERRITORY

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FOREWORD

Accepting the principle that an annual report represents a summary of facts and deductions arising therefrom, one deviation from that principle by way of preface may be permissible to the signatory, whose recall from the high-spirited enthusiasm and team-work associated with a segment of the planning for the invasion of Normandy brought him to this Territory in the closing days of 1944. An impression, confirmed by twelve months' close association, led to the conclusion that the morale of the Territorial Medical Service was depressed in consequence of impatient public and departmental criticism that was not always consequential upon a full appreciation of the problems.

The demoralizing effects of depleting resources and simultaneously extending responsibilities may be counteracted by bringing in "fresh blood" and to that adding the incentive of abandoning the "holding" rôle. This was not possible over the war years. The helpless frustration of observing the wastages in staff and the steadily deteriorating quality of one's own work, coupled with prolonged tours of duty and what was interpreted as a stasis in promotions in common with the inevitable economic and personal restrictions, may be offered as further extenuating circumstances contributing to this state of mind. The cessation of hostilities did little more than release the sense of patriotic fervour and obligation. The result of all this on the medical services of the Territory may be briefly recorded by the statement that the medical position during 1945 continued to deteriorate but remained under reasonable control because of the inherent stubborn temper of the component working parts of the medical "machine".

MEDICAL RESOURCES

STAFF

Since staff lists are essentially concerned with persons and the details in published estimates are concerned with posts, it seems important that some consolidated record should be made of posts, indicating occupational duties and the distribution of these posts in the small recognizable units (districts and provinces) throughout the Territory. The *ad hoc* perspective tends to exaggerate popular enthusiasms, parochial loyalties and expediencies to the possible detriment of the main effort. It therefore seems desirable that a record of stock-taking should be made in order that adjustments in our developmental pattern may be undertaken in a balanced and orderly fashion.

To this end, Table 1 (p. 20) is appended to indicate what may be considered as a consolidated establishment table and strength state as at the 31st December 1945. This suffers from the fact that it is an innovation, but will have the virtue of serving as a datum point for future reference. In Table 2 (p. 21) will be found a list of European retirements and resignations effective during 1945, and in Table 3 (p. 21) particulars of promotions and redesignations of appointments are given, together with an Honours List.

Conference of Provincial Medical Officers.—The first Conference was held in Dar es Salaam in November 1945. All Provincial Medical Officers and the Sleeping Sickness Officer were able to attend. A number of topics were discussed, and where these bore upon the work of special departments, the appropriate officer attended the meeting. It is intended to repeat this Conference annually.

FACILITIES

Inquiry for other purposes has indicated the desirability of reorienting our perspective under this subject heading with a view to indicating the extent to which our facilities meet the medical problems that are found and the patent deficiencies in their distribution. It is considered that, in the absence of these data, we lack the means to plan for the balanced expansion and extensions of resources. To this end, Table 4 (p. 22) is included to show the breakdown by political districts of bed accommodation for general and special services maintained by Central Government and such information as is available from Missionary bodies who afford medical services. An arbitrary datum point for the determination of the beddage needs of the order of 5 beds per 1,000 population has been calculated, and the percentage deviation from this datum has been shown as an index of bed deficiency. In Tables 5 (p. 23) and 6 (p. 23) are shown the distribution of resident medical practitioners and all known hospital beds in the Territory, respectively.

Native Authority medical facilities are financed by Native Administration Treasuries and are operated as far as possible with the supervision of such government medical personnel as are located within the area. This supervision is far from satisfactory, and too frequently these Dispensaries tend to afford a no more serviceable purpose than as a location where remedies when available are under a degree of knowledgeable control, and as places where the public can demand limited treatment for such illnesses as they may consider it convenient to seek advice or judge to be beyond their own resources. Although this form of service is free, it is considered too often to represent some of the worse features of the "shilling doctor" service, where the dispensing of medicine rather than the diagnosis and treatment of disease tends to be cultivated. The maintenance of the latter objectives is considered to require a degree of reorganization, standardization of training and close supervision that is not attainable from our existing thinly spread resources of professional personnel.

FINANCE

Table 7 (p. 23) gives a financial summary for the year, and Table 8 (p. 24) and Appendix II (p. 28) summarize the cost of medical services and the amount of work performed during the British regime in Tanganyika.

THE MEDICAL PROBLEM

Our sources of information on morbidity and mortality, for various substantial reasons, are restricted to the purview of our clinical establishments, scattered information on outbreaks of certain epidemic diseases, and clinical impressions of medical personnel in the course of their limited district visitations. In the absence of enforcement of legal requirements and collecting agencies, our population records are for various—also substantial—reasons merely estimates and our increments and losses by births and deaths are unknown. A broad view of the clinical and epidemiological state of the Territory is therefore not possible. The collection of clinical information, outside the restricted

spheres of governmental establishments, has not as yet been undertaken or collated. Such facts as may be adduced from this report offer an indication of what work is done and how much remains to be done. The inevitable critical query of what could have been done may only be gauged by a reasonable appreciation of space, resources and time. There is, of course, no place for complacency, but there cannot fail to be some weight given to the magnitude of the problem and the meagreness of available human resources trained to deal with the infinite number of facets to that problem.

EPIDEMIC DISEASES

SMALLPOX

Territorial Incidence

(Notifications from all sources)

	1940	1941	1942	1943	1944	1945
Cases	156	92	89	201	5,735	12,283
Deaths	5	6	4	2	38	1,815
Fatality %	3·2	6·5	4·5	1·0	0·7	14·78

From 1940 until 1943, only sporadic cases of smallpox had occurred in the Territory. The majority of these had been reported from the Southern Province, where it was presumed that the infection originated mainly in natives from Portuguese East Africa crossing the southern border in search of work. In the Annual Report for 1943, it was noted that a non-fatal alastrim-like type of smallpox had occurred in the Northern Province, probably brought in by the cattle drovers crossing the Kenya/Tanganyika border. In 1944 this non-fatal type of smallpox, which for convenience may be called alastrim, spread over most parts of the Territory but the main incidence was in the Lake and Central provinces. The general case mortality was well below 1 per cent. In the Southern Province, however, where true smallpox had been endemic for some time, the case mortality remained around the previous figure of 6 per cent. Towards the end of 1944 small foci of a more virulent form of the disease appeared in various places, the first being found in the Speke Gulf area of the Lake Province. During 1945 similar foci appeared in widely scattered places, occurring as far apart as the Lake and Southern provinces, without apparent relationship to one another.

This exaltation in virulence frequently occurred in areas already swept by alastrim, and in several places the initial report of a new extension of alastrim was followed several months later by foci of the more virulent form. Except in the northern areas of the Kigoma district, there was no evidence to suggest that the virulent form had been introduced from outside. Near Kibondo a wave of alastrim which may have spread over the border from the Belgian Congo was followed some seven months later by a similar wave of the virulent form. It was not, however, certain whether the second wave was introduced like the first or arose spontaneously in the already invaded area.

Native reports stated that there was a recognizable difference between the signs and course of the virulent form and the non-virulent alastrim, but careful investigation by medical officers in the Lake Province failed to substantiate these. The accounts given of the difference were vague and the native observers were unable to proffer a reliable description on which to base a differential diagnosis.

Though the general mortality in the Territory from this and the alastrim-like form together was in 1945 only 14.78 per cent in more than 12,000 cases, the local rates in the areas of virulence were fairly consistently reported to be around 20 per cent. Since the more virulent form occurred in various places in all months of the year, its incidence does not appear to be influenced by seasonal or climatic conditions.

Despite energetic vaccination measures and the attempted control of itinerant labour, the disease shows no sign of abating, the incidence of cases having slightly increased and the general mortality having risen to nearly 17 per cent during the first seven months of 1946.

Provincial Incidence

(The following figures have been compiled from weekly bulletins, and it will be noted that this has resulted in a slight discrepancy in 1942 and 1944 as compared with the published annual totals.)

PROVINCE	1940	1941	1942	1943	1944	1945	
Central	-	...	-	...	-	1,594	... 1,336 Cases.
	-	...	-	...	-	11	... 225 Deaths.
	-	...	-	...	-	0.6	... 16.84 Fatality %
Eastern	-	...	-	...	6	625	... 186 Cases.
	-	...	-	...	-	...	- Deaths.
	-	...	-	...	-	...	- Fatality %
Lake	-	...	-	...	-	1,988	... 3,558 Cases.
	-	...	-	...	-	13	... 405 Deaths.
	-	...	-	...	-	0.6	... 11.38 Fatality %
Northern	-	...	-	...	88	399	... 106 Cases.
	-	...	-	...	1	3	... 25 Deaths.
	-	...	-	...	-	0.9	... 23.6 Fatality %
Southern	155	...	89	...	19	128	... 449 Cases.
	5	...	6	...	1	8	... 11 Deaths.
	-	...	-	...	-	6.2	... 2.45 Fatality %
Southern Highlands	1	...	-	...	-	195	... 3,081 Cases.
	-	...	-	...	1	-	... 93 Deaths.
	-	...	-	...	-	-	... 3.02 Fatality %
Tanga	-	...	-	...	47	502	... 50 Cases.
	-	...	-	...	-	2	... - Deaths.
	-	...	-	...	-	0.4	... - Fatality %
Western	-	...	3	...	41	364	... 3,517 Cases.
	-	...	-	...	-	1	... 1,056 Deaths.
	-	...	-	...	-	0.3	... 30.03 Fatality %
Total	156	...	92	...	201	5,735	... 12,283 Cases.
	5	...	6	...	2	38	... 1,815 Deaths.
	3.2	...	6.5	...	1.0	0.7	... 14.78 Fatality %

Lake Province.—At the onset of the virulent form of smallpox, local reports stated that a disease with smaller individual lesions had appeared which seemed to be more severe, giving rise among the people to the suspicion that something new was present. During the last few days of 1944, it was reported that several persons had died from smallpox in one particular district. The Provincial Medical Officer, and the Medical Officer, Sukumaland, visited the area to investigate, and found that there had been 19 deaths. All gradations of severity of the varioloid rash were seen; some cases resembled confluent smallpox, others alastrim. It was decided that only one disease existed but with marked variations in virulence. Small communities could be found that contained sufferers from confluent smallpox (albeit with rather shallow lesions) alongside other persons in whom the attack was as mild as chickenpox, although the distribution of the rash was consistently centrifugal. There was no indication that infection from separate sources had occurred in these communities.

Southern Highlands Province.—From February to September, 2,508 cases with a mortality of 2 per cent were reported; in October there were 91 cases with a mortality of 18 per cent, rising to 112 cases in December with a mortality of nearly 40 per cent.

Western Province.—The alastrim reported in 1944 continued in a similar form over most of the Province, but true smallpox appeared in the western districts. The case mortality here was extremely high.

Southern Province.—An increase of cases was reported due to the spread of a more virulent form from the north, but in this Province, where smallpox had previously been endemic over the last six years, the mortality was the lowest in the Territory, being only 4.2 per cent.

Central Province.—In 1944, following the outbreak of the alastrim-like types, an extensive vaccination campaign was undertaken and it was estimated that just under a quarter of a million vaccinations were done. The incidence in 1945 was slightly lower than in the previous year, but the mortality rose from 6 per cent to nearly 17 per cent. It is suggested that the lymph was not potent at the time of use, since Singida—where during the previous year a thorough vaccination of the community had been carried out—accounted for nearly 25 per cent of the 1945 smallpox cases. The death rate in this district was approximately the same as elsewhere in the Province.

Northern Province.—The incidence of the disease declined as the virulence increased. Extensive vaccination was performed in Masailand and along the Ruvu River.

Vaccination

Large scale vaccination was continued in all districts. The closing down of the Territory's lymph manufacture early in the year necessitated the purchase of supplies from outside. The potency of some of the supplies received did not appear to be as stable as that of the local product, and it is considered probable that active immunity was thus not acquired by a large proportion of the vaccinated persons. The distribution of the lymph over the large areas involved, and the provision of adequate storage facilities in the field, presented a serious and as yet unsolved problem. On account of the shortage of heat-insulated containers and the difficulty—and in many areas the impossibility—of arranging fast mechanical transport of the lymph, the efficacy of the vaccination campaign was seriously reduced.

The scattered distribution of the populace, the very limited supervisory staff available, and the necessity of covering as wide areas as possible in the shortest time, prevented any thorough examination of vaccinia reactions amongst vaccinated persons. The difficulties of checking previous vaccination among those infected by either the alastrim type or the more virulent form rendered it impossible to ascertain the effectiveness of previous vaccination campaigns against either of these manifestations of the disease. Failing this as an explanation, the suspicion arises that the immunity conferred by the alastrim-like disease and the vaccine virus used does not give substantial protection against the more virulent type of infection: if this hypothesis is correct, it is possible that an antigenically new virus must be considered.

Against these views must be offset the fact that epidemiological information has suffered from scattered non-technical reports on gross incidence, without consideration of the age-incidence of either cases or deaths. This cannot be rectified until increases in experienced staff become possible.

CEREBRO-SPINAL MENINGITIS

The general incidence over the Territory and within individual Provinces showed a fall in 1945. It appears that the epidemic which started in 1939 and reached its peak in 1942 is now on the decline. The only increased number of cases was reported from the Tanga Province, where the infection was found mainly among the immigrant labourers who work upon the sisal estates.

Territorial Incidence

Year	Cases	Deaths	Fatality per cent
1935	153	66	43·1
1936	179	114	63·7
1937	269	125	46·5*
1938	218	82	37·6
1939	2,183	237	10·9†
1940	1,108	260	23·4
1941	2,746	540	19·7
1942	11,687	1,719	14·7
1943	8,800	1,395	15·8
1944	3,463	645	18·6
1945	2,537	546	21·5

*Sulphonamide therapy was used on a small scale.

†Sulphonamide therapy was generally used in all areas as far as supplies would permit.

The possibility of the development of a sulpha-resistant strain of meningococci has been raised by several medical officers in the Territory. Reports from individual hospitals have shown an increasing mortality over the past few years among in-patients. This is to some extent reflected in the figures shown below :—

	1940	1941	1942	1943	1944	1945
In-patients	276	755	2,382	1,322	2,384	622
Deaths	73	136	498	362	468	201
Fatality %	26·5	18	20·9	27·4	19·6	32·3

However, analysis of records from individual hospitals and by Provinces shows that this theory cannot be supported. The provincial incidence of this disease is as follows :—

PROVINCE	1940	1941	1942	1943	1944	1945	
Central	21	129	621	370	243	229	Cases.
	7	18	63	61	35	39	Deaths.
	—	14	10·1	16·5	14·4	17	Fatality %
Eastern	42	632	828	660	203	103	Cases.
	20	251	195	110	49	30	Deaths.
	—	39·8	42·4	16·7	24·2	29·1	Fatality %
Lake	231	179	6,660	3,779	1,627	1,128	Cases.
	86	44	819	536	351	320	Deaths.
	37·3	24·6	12·2	15·5	21·5	28·3	Fatality %
Northern	226	186	267	436	59	57	Cases.
	29	21	31	26	4	20	Deaths.
	12·8	11·3	11·6	6	—	—	Fatality
Southern	80	93	683	1,118	424	155	Cases.
	26	20	213	146	49	23	Deaths.
	—	—	31·3	13·0	11·5	14·8	Fatality %
Southern Highlands	49	6	22	121	16	133	Cases.
	14	2	5	46	11	28	Deaths.
	—	—	—	—	—	21·0	Fatality %

PROVINCE	1940	1941	1942	1943	1944	1945	
Tanga	- ...	17 ...	27 ...	37 ...	45 ...	104 ...	Cases.
	- ...	9 ...	5 ...	8 ...	20 ...	13 ...	Deaths.
	- ...	- ...	- ...	- ...	- ...	12·5 ...	Fatality %
Western	459 ...	1,504 ...	2,579 ...	2,279 ...	846 ...	628 ...	Cases.
	78 ...	175 ...	338 ...	412 ...	126 ...	73 ...	Deaths.
	17 ...	11·6 ...	15·0 ...	18·0 ...	14·9 ...	11·6 ...	Fatality %
Totals	1,108 ...	2,746 ...	11,687 ...	8,800 ...	3,463 ...	2,537 ...	Cases.
	260 ...	540 ...	1,719 ...	1,395 ...	645 ...	546 ...	Deaths.
	23·4 ...	19·7 ...	14·7 ...	15·8 ...	18·6 ...	21·5 ...	Fatality %

Reports from the Lake Province since 1942 when the fatality rate was 12·2 per cent amongst more than 6,000 cases, until 1945 when it was 28·3 per cent over 1,128 cases, appeared to indicate that treatment was becoming less effective. In this Province, a routine form of treatment in an attempt to sterilize contacts by the administration of short courses of sulphapyridine and sulphanilamide was commenced in 1943. However, as this practice was followed mainly in the camps established for emigrant labour, it was not to be expected that this form of prophylaxis would have any great effect upon the incidence of the disease within the Province. In contrast to this, the fatality rate in the Western Province has shown very little change over the last five years.

The local distribution during the last year has altered very little, and no new areas appear to have become affected. In the Lake Province the disease appears to be spread from many widely dispersed foci, affecting mainly the southern and eastern areas of the Province, the districts of Bukoba, Biharamulo and Musoma being relatively free. In the Western Province no further spread southward has been reported and in the Southern Highlands Province the cases are still reported mainly from the Njombe district on the shores of Lake Nyasa. The absence of data on the age distribution of cases and deaths seriously handicaps the epidemiological perspective in this appreciation.

HUMAN TRYPANOSOMIASIS

Territorial incidence of Human Trypanosomiasis (Sleeping Sickness) by Districts and Provinces

Province and District	1942		1943		1944		1945	
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
CENTRAL:								
Mkalama	... 2 ...	1 ...	4 ...	- ...	1 ...	- ...	10 ...	4 ...
Kondoa-Irang'i	- ...	- ...	- ...	- ...	4 ...	- ...	3 ...	1 ...
EASTERN:								
Mahenge	... 22 ...	17 ...	20 ...	4 ...	43 ...	13 ...	25 ...	6 ...
Morogoro	... - ...	- ...	- ...	- ...	4 ...	- ...	- ...	- ...
LAKE:								
Biharamulo	... 15 ...	6 ...	14 ...	2 ...	24 ...	3 ...	34 ...	8 ...
Mwanza	... 22 ...	34 ...	10 ...	5 ...	7 ...	5 ...	9 ...	2 ...
Musoma	... 60 ...	2 ...	27 ...	1 ...	23 ...	1 ...	33 ...	2 ...
NORTHERN:								
Babati area	... - ...	- ...	27 ...	- ...	215 ...	32 ...	86 ...	12 ...
SOUTHERN:								
Liwale	... 25 ...	28 ...	13 ...	25 ...	5 ...	13 ...	- ...	6 ...
Masasi	... 8 ...	2 ...	13 ...	5 ...	53 ...	1 ...	10 ...	5 ...
Tunduru	... 40 ...	5 ...	28 ...	4 ...	22 ...	11 ...	23 ...	6 ...
Songea	... 1 ...	1 ...	11 ...	5 ...	5 ...	3 ...	2 ...	- ...
SOUTHERN HIGHLANDS:								
Chunya	... 1 ...	- ...	5 ...	- ...	6 ...	2 ...	1 ...	- ...

HUMAN TRYPANOSOMIASIS—(contd.)

Territorial incidence of Human Trypanosomiasis (Sleeping Sickness) by Districts and Provinces—(contd.)

Province and District	1942		1943		1944		1945	
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
TANGA:	...	—	...	—	...	—	...	—
WESTERN:								
Kigoma	...	6	...	3	...	33	...	1
Kibondo	...	83	...	35	...	90	...	55
Kasulu	...	24	...	12	...	18	...	14
Kahama	...	74	...	30	...	80	...	42
Ufipa	...	2	...	2	...	—	...	—
Tabora	...	71	...	42	...	46	...	18
Total	...	456	...	220	...	439	...	181
Fatality %		48.2				41.5		
								27.3
								28.2

The Babati outbreak which started in 1943 appeared to be diminishing although extension of spread was not completely under control. An inter-departmental conference held in December 1945 drew up a programme for permanent control in this area.

There was little significant change to be observed in the position in other affected areas.

ENDEMIC DISEASES

MALARIA AND BLACKWATER FEVER

Malaria

	1940	1941	1942	1943	1944	1945
Out-patients	...	68,144	...	73,189	...	74,414
In-patients	...	4,936	...	6,331	...	7,292
Fatality %						
in-patients	...	1.5	...	1.5	...	1.4

Blackwater Fever

	1940	1941	1942	1943	1944	1945
Out-patients	...	11	...	30	...	15
In-patients	...	50	...	42	...	95
Deaths	...	15	...	8	...	21

It will be noted that there has been a steady increase in the number of cases of malaria recorded during the past five years, but from the data available it is not possible to say whether this may be attributed to higher incidence or to other factors such as improved methods of diagnosis and record-keeping. There has been little apparent variation in the fatality rate. The figures for blackwater fever are too small to justify any conclusion being based upon them.

A note on the incidence of malaria under treatment at the European Hospital, Dar es Salaam, is given at Appendix III (p. 29).

RELAPSING FEVER

	1940	1941	1942	1943	1944	1945
Out-patients	...	1,147	...	1,762	...	1,857
In-patients	...	547	...	457	...	816
Fatality %						
in-patients	...	6.9	...	3.3	...	1.8

The incidence of relapsing fever throughout the Territory appears to be increasing. This may be due in part to a more extensive use of the microscope

in the diagnosis of fevers, but it may also be accounted for by the urban spread of the tick. (Several townships report an increasing proportion of infested houses).

In the Lake Province an increased incidence has been found at the Geita Mines and in the urban regions generally.

In the Southern Highlands Province increases have been noticed mainly at transit camps and other places where itinerant labour collect.

In the Eastern Province the Medical Officer, Morogoro, undertook a survey of the town and found that an increasing number of houses were infected with tick.

Increases are also reported from the Central Province.

The Provincial Medical Officer of the Western Province reports a high incidence of the disease amongst children attending the Maternity and Child Welfare Clinic and considers that this may be an important contributory factor to the high general mortality rate among children.

SCHISTOSOMIASIS

	1940	1941	1942	1943	1944	1945
Out-patients ...	7,169	10,433	10,674	12,020	8,747	10,324
In-patients ...	482	521	593	669	452	474
Deaths reported ...	3	10	1	12	13	3

This disease is more prevalent in the Lake and Eastern Provinces than elsewhere. Generally *S. haematobium* is the more common infection, but *S. mansoni* predominates in the Mwanza area of the Lake Province and also around the Rukwa cleft in the Western Province, which has the third highest incidence.

ANKYLOSTOMIASIS

	1940	1941	1942	1943	1944	1945
Out-patients ...	15,607	14,535	17,738	20,398	21,630	20,556
In-patients ...	1,617	1,851	1,955	2,009	2,089	2,113
Fatality %						
in-patients ...	7·1	7·5	5·6	7·35	5·95	7·15

The apparent increase in the incidence of this disease is more a reflection of the greater number of attendances at hospitals and the wider use of the microscope in diagnosis than of increased prevalence. Nutritional conditions without clear cut symptoms or signs are frequently classified under this head merely upon the presence of Ankylostome ova in the stool. As a rule the infection is not massive and the Ankylostome but one of many disease-producing factors.

THE DYSENTERIES

Amoebic

	1940	1941	1942	1943	1944	1945
Out-patients ...	282	711	351	795	616	279
In-patients ...	200	329	249	215	408	171
Fatality %						
in-patients ...	6·0	3·4	7·6	7·5	6·4	5·8

Bacillary

	1940	1941	1942	1943	1944	1945
Out-patients ...	167	116	177	285	1,085	674
In-patients ...	167	136	92	242	566	302
Fatality %						
in-patients ...	19·1	8·1	6·5	27·7	16·8	10·6

Dysenteries unclassified

	1940	1941	1942	1943	1944	1945
Out-patients ...	341 ...	1,359 ...	1,898 ...	2,180 ...	2,919 ...	1,960
In-patients ...	198 ...	341 ...	446 ...	533 ...	784 ...	544
Fatality %						
in-patients ...	4·5 ...	3·8 ...	4·9 ...	14·5 ...	14·0 ...	7·5

The classification in the various groups is given above. The fatality rate of the unclassified incidence group reflects with some accuracy the conditions upon estates and among contracted labour, who form a large proportion of the total patients. Tanga, for instance, reports a marked reduction of cases following improved feeding and medical conditions generally upon the local sisal estates.

THE ENTERIC FEVERS

	1940	1941	1942	1943	1944	1945
Out-patients ...	79 ...	16 ...	6 ...	12 ...	90 ...	14
In-patients ...	151 ...	133 ...	101 ...	132 ...	214 ...	203
Deaths ...	25 ...	26 ...	27 ...	24 ...	27 ...	43

The recorded cases are made up from sporadic infections. One small outbreak occurred in Mbeya among Europeans recently arrived in the Territory. All produced evidence of preventative inoculation in England prior to sailing, but the Widal reaction gave no evidence of protection either in those affected with the disease or in those who escaped infection.

VENEREAL DISEASES AND YAWS

Syphilis

	1940	1941	1942	1943	1944	1945
Out-patients ...	28,920 ...	35,362 ...	36,766 ...	44,256 ...	35,644 ...	38,614
In-patients ...	1,013 ...	1,125 ...	1,336 ...	1,669 ...	1,637 ...	1,705

Gonorrhoea

	1940	1941	1942	1943	1944	1945
Out-patients ...	12,805 ...	14,792 ...	16,762 ...	15,325 ...	14,915 ...	15,699
In-patients ...	942 ...	1,035 ...	1,440 ...	1,905 ...	2,221 ...	2,982

Yaws

	1940	1941	1942	1943	1944	1945
Out-patients ...	84,896 ...	77,228 ...	71,847 ...	78,350 ...	70,977 ...	68,446
In-patients ...	814 ...	771 ...	707 ...	882 ...	914 ...	644

There has been a slight increase in the number of cases of syphilis reported throughout the Territory, which may or may not be offset by the small decrease in yaws cases. Differentiation between these two diseases during the late secondary and tertiary periods is a matter of such difficulty that the diagnosis particularly among out-patients, more often rests upon the information tendered by the patient than the observations of the medical examiner. This possibility is borne out by the remarks of the Provincial Medical Officer, Southern Highlands Province, who noted that in the large dispensary on Lake Nyasa, the officer in charge had reported a very much higher incidence of yaws in proportion to syphilis than elsewhere in the Province: it is suggested that the discrepancy may be due to confusion of diagnosis. The Provincial Medical Officer, Lake Province, also noted a relationship between diagnosed cases of yaws and syphilis: those stations diagnosing a large proportion of syphilis reported a proportionately small number of yaws, and *vice versa*.

In the Lake Province a marked increase of syphilis has been recorded, and in many hospitals the number of patients treated for this disease has exceeded that for malaria—which heretofore accounted for the greatest number of attendances. In Bukoba, gonorrhoea was foremost amongst the recorded cases of venereal diseases, a large amount of genito-urinary surgery being performed to ameliorate the late effects.

Popular opinion is convinced that venereal disease is on the increase in this Territory, but statistics do not entirely bear this out. It has been suggested that the more successful treatment of the florid manifestations of yaws, and the greater consequential readiness of the populace to attend for treatment during the early stages of infection with this complaint, may have created a more susceptible soil for the implantation of the syphilitic infection: no figures have been produced to substantiate these theories. Since serological tests do not distinguish between the two diseases (and dark-ground examinations are rarely carried out), and since treatment is seldom continued until a cure has been effected owing to the failure of the patient to persist with treatment, the available figures cannot be considered to give a reliable picture of the differing incidence.

TUBERCULOSIS

Tuberculosis—Respiratory

	1940	1941	1942	1943	1944	1945
Out-patients ...	1,821	2,064	2,460	2,807	2,312	2,988
In-patients ...	468	592	667	722	804	886
Deaths ...	67	72	72	125	171	134
Fatality %						
in-patients ...	14.3	13.5	10.8	17.3	21.3	15.1

Tuberculosis—Other Regions

	1940	1941	1942	1943	1944	1945
Out-patients ...	991	812	1,055	1,267	1,180	1,832
In-patients ...	135	150	230	211	217	308
Deaths ...	12	14	13	17	13	17
Fatality %						
in-patients ...	8.9	9.3	5.6	8.1	6.0	5.5

Clinical impressions and records indicate that tuberculosis is increasing, especially in the towns where both the African and the Asian communities are affected. The position was discussed at the conference of Provincial Medical Officers in November, and the necessity for concentration of effort upon the early and more curable cases was urged. It was felt that the diagnosis was too often made at a stage of the disease when cure was improbable, and that greater attempts must be made to seek out and keep under surveillance the contacts of reported cases.

PNEUMONIA

	1940	1941	1942	1943	1944	1945
In-patients ...	1,456	1,937	2,925	3,271	3,167	3,903
Deaths ...	240	270	299	338	355	420
Fatality %						
in-patients ...	16.5	13.9	10.2	10.3	11.2	10.7

The proportion of cases of pneumonia admitted to hospital and total admissions shows a steady increase over the last five years. There does not appear to be an obvious explanation for this.

FROM THE REPORTS OF PROVINCIAL MEDICAL OFFICERS

CENTRAL PROVINCE

The old hospital at Mkalama has now been closed down and replaced by a dispensary. A new dispensary has been erected at Itigi, the terminus of the Railways road service to the south. New buildings comprising a laboratory dispensary and occupational therapy block with offices and quarters have been erected at the Mental Hospital, Dodoma.

Sleeping Sickness.—A few cases have been reported from Singida and Kondoa, probably contracted in the Northern Province. On account of the threatened extension of tsetse towards Mpwapwa, clearing of bush is projected in the Bubu valley as a subsidiary part of the larger Northern Province scheme.

Nutrition.—There have been local shortages of food in some areas towards the end of the year and signs of malnutrition generally were common. Permanent silos for the storage of foodstuffs until the next harvest becomes available are being built in all districts.

LAKE PROVINCE

A clearance of grass and reclamation of a portion of the lake margin at Mwanza was made with the object of reducing the *Anopheline* breeding. This was particularly successful though maintenance costs are expected to be high, but no effect was noticed on the number of bilharzia-carrying snails in the cleared area.

Anti-amaryl measures to reduce the *Aedes* index have been carried out in the township, but the movements of Africans from Kenya and Uganda over the Tanganyika border have proved impossible to control.

A survey of in-patients was undertaken at all the Lake Province hospitals on one day of the year, when it was found that from 30 per cent to 75 per cent of the cases maintained on that day as in-patients should more properly have been treated as out-patients and were being accommodated in beds for non-medical reasons—some because they had come from a distance and could not find accommodation locally, others due to lack of facilities to feed themselves while under treatment or because proper control of the patient was only possible when fully hospitalized.

At the Mwanza School for African Medical Auxiliaries, a modification was made in the curriculum by teaching not only at the school which is located within the precincts of the Mwanza Hospital but also at some of the nearby rural dispensaries. Lack of staff and transport prevented the full development of this scheme, but it was felt the principle was sound and the method worthy of more general adoption.

NORTHERN PROVINCE

Sleeping Sickness.—(See also section on Epidemic Diseases). Two new foci have appeared in extension of the original Babati outbreak, one in the Galappo-Bonga area south of Babati and the other north of Maguga. They are believed to be extensions of the original Kivu focus. Fly disinfecting chambers have been erected on the Kaiti-Babati section of the road to Arusha and clearance of a strip of bush on either side of the road is in hand. A new dispensary has

been erected in the Maguga area on a permanent basis to deal with this and general diseases. Large scale clearing is projected to limit the spread of the tsetse-fly.

Yellow Fever.—The Moshi aerodrome is now the first port of landing for aircraft on this route from Kenya which has been declared an infected area. A Senior Health Inspector was posted to supervise quarantine measures. The *Aedes* index in the township remains low.

Tuberculosis.—An increased number of patients treated was reported at the Tuberculosis Hospital at Kibongoto where the follow-up of cases after discharge from Hospital is being actively maintained.

Tetanus.—In the Arusha district tetanus is especially common. Thirty-four cases were treated, of which sixteen died.

SOUTHERN PROVINCE

Yaws.—The Senior Medical Officer reports an apparent increase in the incidence of yaws. This is believed to be related to the "cloaking" effect of the generally used bismuth injection and the prejudice among the natives against treatment during the florid stage, the native superstition being that the disease is not ready for treatment until this stage has been passed.

Yellow Fever.—The *Aedes* index has been reduced in the towns of Lindi, Kilwa and Mikindani to what is considered a safe level.

The general health of the local labour is considered poor, especially in the eastern districts where helminthic infection and poor nutrition are the predominant factors. It is considered that in these areas the diet obtainable is generally sub-optimum.

SOUTHERN HIGHLANDS PROVINCE

In the gold-bearing Lupa Controlled Area, the Provincial Medical Officer notes that the number of natives employed on alluvial workings continues to fall. In 1937 there were 13,800, in 1941 9,800, while at present there are only 2,500 so employed.

Trachoma.—A survey of African schools in Mbeya, Iringa and Tukuyu revealed an incidence of trachoma of 38 per cent amongst 600 children. Generally the disease is mild and only about 40 moderately advanced cases were seen. It was suggested that much of the conjunctivitis diagnosed in out-patient dispensaries is in reality trachoma.

TANGA PROVINCE

To foster local interest in village sanitation, arrangements were made for a Health Inspector to visit such villages as are accessible by motor transport. Frequent visits were made and direct supervision of local sanitation was undertaken. For the less accessible areas a mobile unit, consisting of an African "Health Information Officer"—a man selected mainly upon the grounds of character and local standing—a native Sanitary Inspector and a microscopist, was trained. They visited suitable areas, gave talks upon helminthic infestation, general disease and allied topics, determined the incidence of these diseases by a rough survey and followed with demonstrations in prevention and as far as possible of cure. It is too early to assess results, but with strong and continued propaganda it is hoped to reduce the incidence of some of the commoner and more easily prevented diseases.

The Muheza Hospital was opened in March. After some early setbacks associated with the higher scale of fees charged to employers of labour, it came into full use by the end of the year, when its services were made available to the general male population.

WESTERN PROVINCE

Following the opening of a large R.A.F. camp at Tabora, aerial spraying with D.D.T. was carried out over the township and resulted in a marked decrease in *Anopheline* infestation. The aerodrome was in continuous use by the S.A.A.F. and by the newly instituted civil air service between Rhodesia and Nairobi. Disinsectization of all planes was carried out by the aerodrome staff under the supervision of the local Health Department.

The new ante-natal block at the Tabora Natiye Hospital proved popular and training was given here to some of the senior girls from the local Government School in practical mothercraft and elementary ante-natal care.

LEPROSY

In the Makete Leprosy Settlement in the Southern Highlands Province, 932 patients are now resident: 64 were discharged during the year. The layworker in charge reports that all patients are able to contribute to their own support and that there are now 3,000 acres under cultivation. In addition there are many handicrafts practised such as weaving, carpentry, brick-making and masonry. Treatment of lesions by injections of basic fuchsin is under trial and has given some promising results.

The appointment, as Temporary Medical Officer, of C. A. Wallace, M.B., B.Ch., B.A.O. (Queen's University, Belfast), late of the C.M.S. in this Territory, to assume medical direction of the *ad hoc* Chazi Leprosy Settlement in the Eastern Province is to be noted. This settlement at present serves no other purpose than as a temporary settlement to meet local contingencies. Careful consideration is being given to the suitability of the location, ultimate functions and organization. However, decision on these problems awaits the considered opinion and recommendations of an Interterritorial Specialist on Leprosy, whose appointment has been postponed until negotiations as to his availability may be completed. It is acknowledged that without specialist advice upon this specific problem, the formulation and acceptance of policy will be complicated and probably compromised. For these reasons no advance in the reorganization of the manifestly outmoded care and treatment of lepers can be reported.

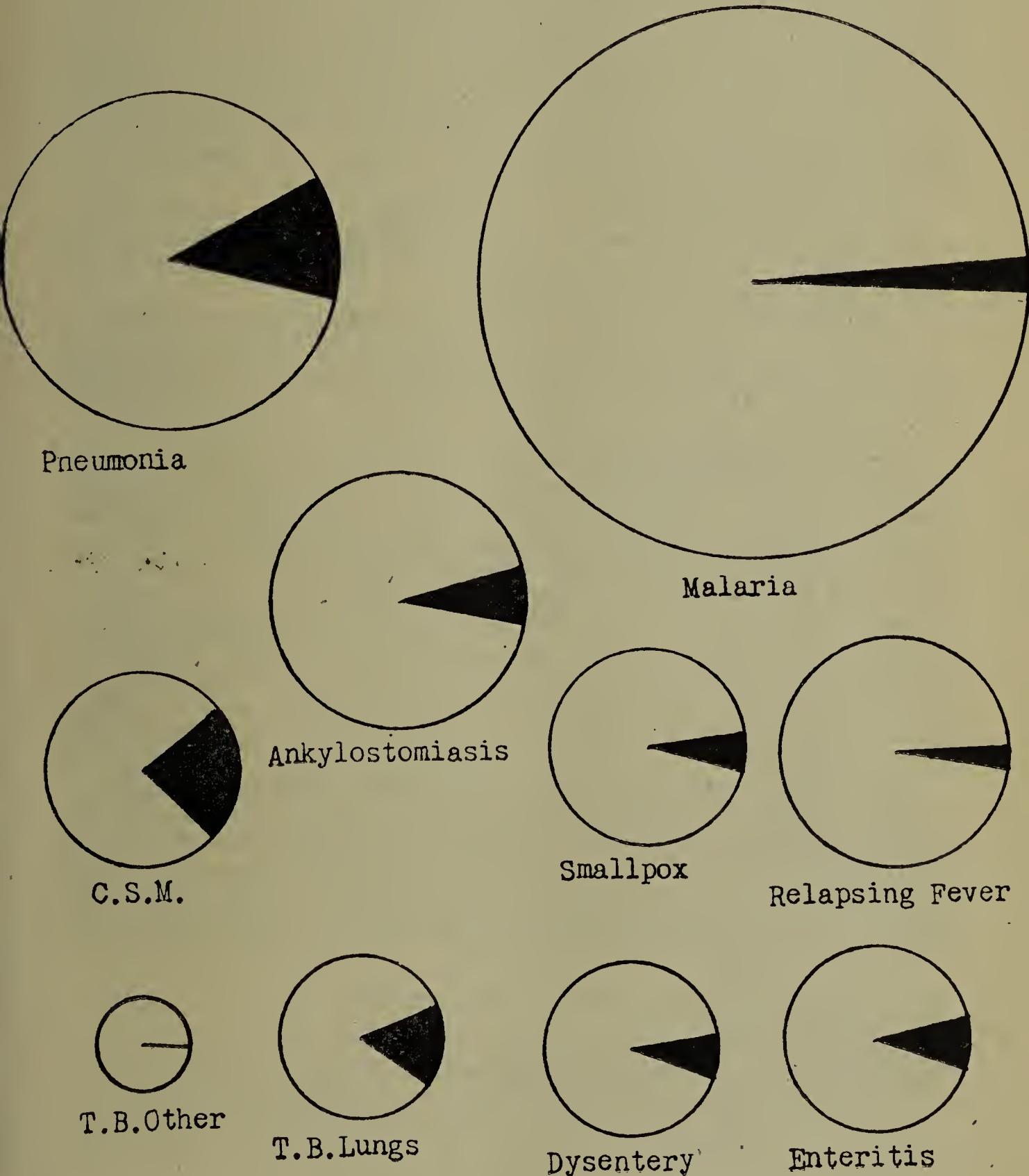
THE LETHAL DISEASES

In-Patients

Disease	No. of Cases	Per cent of total In-patients	No. of Deaths	Per cent of total Deaths	Per cent Fatalities of Disease
Malaria	10,778	16.60	179	6.54	1.6
Relapsing Fever ...	1,815	2.79	33	1.20	1.8
The Dysenteries ...	1,017	1.56	83	3.03	7.7
Enteritis (Adult)...	1,189	1.83	104	3.80	8.7
The Pneumonias ...	3,903	6.01	420	15.33	10.7
C.S.M.	622	0.96	201	7.34	32.3
Smallpox	1,305	2.01	66	2.41	5.0
Ankylostomiasis ...	2,113	3.26	151	5.52	7.15
T.B. Lungs	886	1.36	134	4.75	14.6
T.B., other	308	.47	17	0.62	5.5

CHART I
THE LETHAL DISEASES—INCIDENCE AND FATALITY

Areas are proportional to number of cases recorded. Shaded areas are proportional to the number of deaths.



FROM THE REPORTS OF THE SPECIALISTS

LABOUR CONDITIONS

The conditions of housing, feeding and medical attention of labour on estates showed signs of improvement during the past year, especially in the Tanga Province. This was reflected in the numbers of admissions for ulcers, which decreased to some 50 per cent of the figures for the previous year, and in the admissions for non-specific dysenteries—as mentioned above—a condition which is considered to be a very sensitive “indicator” of the attention given to the sanitary and physical welfare of a labour force. Among the Morogoro and Central Line estates the conditions are not equally good and a considerable incidence of dysentery is reported from Morogoro where it is in part attributed to pollution of the Ngerengere River which provides most estates in this area with their water supply. In the Northern Province also a very high incidence of ulcers has been reported among the labour working both upon estates and the anti-tsetse clearing schemes.

In recruitment the influence of the war in removing the physically fitter individual from the labour pool is seen in the continued high rate of rejection of candidates for employment in industry. This still remains above 30 per cent of those presented for examination.

Complaint is made by the Senior Medical Officer, Southern Highlands Province, of the condition of many of the labourers returning to their homes after work on the estates and the need for more transit camps to house them on the stages of their journey. Several additional camps have been erected in this area and more are contemplated.

The new recruiting organization for the Sisal Growers (*Silabu*) has been established. In the Western Province, where its main efforts are at present directed, its progress so far has been slower than anticipated. The proposed camp near Kahama for the final examination of labour from Ruanda and north-western areas of the Territory was not completed by the end of the year. The method of payment of the numerous satellite recruiters on the number of recruits they can obtain has provoked considerable criticism, as the custom leads to concentration on numbers and neglects to some extent other interests such as those of the employer whose need is for fit and strong labour. It thus tends to raise the rate of rejection upon medical grounds, while the employment of large numbers of independent recruiters multiplies such factors necessitating control.

The Medical Specialist attached to the Labour Department made an intensive survey of conditions upon estates in the Tanga Province during the months of July and August. Following this, drastic action was taken by the Labour Department and a further survey in October and November showed that considerable improvements had been made. He reported that the essential facilities on these estates had been tabulated and the estates graded. The facilities tabulated were as follows:—

1. Compound—Siting.
2. Compound—Layout.
3. Compound—Supervision.
4. Housing—Construction and maintenance:
 - Permanent.
 - Semi-permanent.
 - Temporary.

5. Sanitation—Latrines.
6. Sanitation—Refuse Disposal.
7. Sanitation—Maintenance.
8. Food.
9. Food—Storage.
10. Water Supply.
11. Facilities—Bathing.
12. Facilities—Washing.
13. Medical—Buildings.
14. Medical—Drugs, dressings and equipment.
15. Medical—Records.
16. Medical—Supervision and Staff.

Each facility was assessed as very unsatisfactory, unsatisfactory, fair, good or very good, and for estate grading the following points were given:—

Very unsatisfactory	=	0 points.
Unsatisfactory	=	1 "
Fair	=	2 "
Good	=	3 "
Very good	=	4 "

This gave a total possible score of 64 points for any one estate.

Estates were graded as follows:—

Very good (V.G.)	=	45 points or more.
Good (G.)	=	35—44 points.
Fair (F.)	=	25—34 "
Unsatisfactory (U.)	=	15—24 "
Very unsatisfactory (V.U.)	=	Less than 15 points.

The results of this tabulation were as follows:—

Number of Estates listed as—

	V.U.	U.	F.	G.	V.G.	Mortality per thousand
1st half of 1945 ...	7 ...	17 ...	25 ...	3 ...	0 ...	4.8
2nd half of 1945 ...	0 ...	4 ...	23 ...	23 ...	*0 ...	3.2

*2 estates were within one point of being listed as very good.

On the estates controlled by the Custodian of Enemy Property at Oldeani, an experiment in the communal feeding of the employed labour was made. The full ration was issued to a central kitchen, there cooked and distributed to the various groups who were assembled in a banda constructed and used as a dining room. Three meals a day were given at 6.30 a.m., mid-day and 6 p.m. Contrary to expectation, the scheme proved popular with the local labour.

THE KIBONGOTO TUBERCULOSIS HOSPITAL

At Kibongoto there is permanent accommodation for 85 patients only. During the year the daily average of in-patients was 160. The excess were accommodated in simple lean-to shelters made of poles and banana-leaf thatching which though primitive in construction provided useful "open-air" treatment wards.

The hospital mainly serves the local tribe, the Chagga, but 22 per cent of the African patients were from other parts of the Territory. Normally only these latter are detained in hospital for the full duration of their treatment period. The majority of the local Chagga are discharged as soon as possible to their homes, where they come under the dispensary and home visiting section of the Kibongoto service. Here the patient is seen at regular intervals at one of the dispensaries established in Moshi district where progress is carefully watched. These dispensaries are in charge of Africans trained at Kibongoto and working in close liaison with the main hospital. They are visited monthly by the Medical Officer in charge and are trained to perform pneumothorax refills and to interpret tuberculin tests. They also act as Health Visitors and visit the infectious patients in their houses giving advice primarily directed to the avoidance of spread of the infection. Contacts are examined here and those who react to the tuberculin test referred to Kibongoto for further investigation.

The principles guiding the administration of the scheme are, in the words of the Medical Officer in charge:—

1. To seek out, treat and isolate the infectious case.
2. To endeavour to cut the infection-reinfection-decease line wherever possible by the examination, follow-up and treatment of contacts of known infectious cases; and by teaching the general population to come for examination within a reasonable time of the onset of chest symptoms.

During the past year 346 new cases were seen and 1,584 received further advice, examination and treatment. The increasing number of new local cases admitted has imposed a heavy strain on the main hospital but by better transport, improved X-ray facilities (with a new machine) and closer attention to dispensary work, the observation time required for the local cases as in-patients was reduced and an increased number of in-patients thereby accommodated.

THE MENTAL HOSPITAL, DODOMA

The number of patients treated has increased during the past year following a change of policy by which as far as possible only the acute cases are admitted while the chronic and incurables are sent to Lutindi. The admission rate has increased by 45 per cent and the discharge rate by 52 per cent. The number of patients discharged as cured has nearly doubled.

Greater use has been made of electrical and insulin shock therapy in inpatients suffering from such conditions as involutional melancholia and manic depressive psychoses with encouraging results and it is estimated that about one-third of the discharges have been made possible by the use of this treatment.

Dodoma is becoming more an institution for treatment and less a place of detention than hitherto: thus the plans for occupational therapy in farming have been dropped in favour of work more directly useful to the operation of the institution itself.

It is noteworthy that four cases of confusional insanity associated with malaria and its treatment with mepacrine were seen during the year. It is not however claimed that the use of the drug was directly responsible for the mental condition.

MEDICAL LABORATORY

Routine examinations have increased this year by nearly one-fifth.

The first systematic training course for African Laboratory Assistants was started during the year, six students being admitted.

Owing to the retirement of the Laboratory Superintendent at Mpwapwa through ill-health, the local production of lymph was discontinued, necessitating purchase from external sources.

Extensions to the Dar es Salaam laboratory were completed and occupied during the year, and the new teaching laboratory was brought into use in April.

No special investigations were undertaken during the year.

Dar es Salaam,
November 1946

P. A. T. SNEATH,
Director of Medical Services

TABLE 1—ESTABLISHMENT AND EMPLOYMENT TABLE—1945.

POSTS	ESTABLISHMENT				STRENGTH 31ST DECEMBER 1945				DEPLETIONS			
	African	Asian	European	Total	African	Asian	European	Total	Vacancies Total	Supplement by Secondment	Secondment	Leave pending retirement	Retirement
<i>Professional</i>												
1. Administrative, Territorial and Provincial ...	—	—	—	—	—	—	—	—	—	—	2	—
2. Clinical—specialists, other medical personnel ...	5	55	49	109	5	47	35	87	22	2	3	3
3. Dental ...	—	—	—	—	—	—	—	—	2	—	—	—
4. Health and epidemiology—medical ...	—	—	—	—	12	12	—	—	7	5	—	—
5. Health and epidemiology—nursing, etc. ...	—	—	—	—	—	—	—	—	5	3	—	1
6. Laboratories ...	—	—	—	—	8	8	—	—	4	4	—	—
7. Nursing—general—female ...	—	—	—	—	5	5	—	—	1	1	—	—
8. Nursing—special—male ...	—	—	—	—	57	57	—	—	43	43	3	10
9. Nursing—special—female ...	—	—	—	—	3	3	—	—	1	2	—	—
10. Pharmacy ...	—	—	—	—	16	7	23	—	14	5	4	—
<i>Technical</i>												
11. Administrative ...	—	—	—	—	31	6	6	—	1	1	—	—
12. Clerical ...	—	—	—	—	16	6	68	37	3	67	1	—
13. Clinical ...	—	—	—	—	—	2	17	—	10	10	7	—
14. Dental ...	—	—	—	—	—	1	—	—	1	1	—	—
15. Health ...	—	—	—	—	31	32	1	—	24	25	3	—
16. Hospitals—general and special ...	—	—	—	—	5	8	—	2	4	6	2	—
17. Laboratories ...	—	—	—	—	4	5	—	—	2	2	3	—
18. Pharmacy ...	—	—	—	—	3	3	—	3	—	7	1	—
19. Training—medical, nursing and industrial ...	—	—	—	—	5	5	—	—	3	3	2	—
<i>Auxiliary</i>												
20. Clinical ...	—	—	—	—	135	—	135	101	—	101	34	—
21. Health ...	—	—	—	—	140	8	148	114	7	121	27	—
22. Laboratories ...	—	—	—	—	36	—	36	26	—	26	10	—
	355	132	219	706	288	110	152	550	156	3	6	8
23. Students—Hospital Assistants												
24. Students—Laboratory Assistants												
<i>Ad hoc</i>												
Leave pending retirement ...	... ... ...	... ... ...	... ... ...	... ... ...	323	110	—	152	—	25	10	—
Leave ...	...	...	...	...	1	3	—	8	7	8	11	—
Effective strength at 31.12.45	...	...	...	...	322	107	137	566	3	6	8	17

TABLE 2
EUROPEAN RETIREMENTS, ETC., EFFECTIVE DURING 1945—PERMANENT
PENSIONABLE ESTABLISHMENT

Name and Appointment	Date of 1st appt. to T.T.	Effective date of retirement, etc.	Remarks
1. R. C. Speirs, O.B.E., M.D. (Edin.), D.T.M. (Liv.), Medical Officer ...	30.4.25	... 31.5.45	Transferred to Kenya (on promotion).
2. S. E. Theis, M.R.C.S., L.R.C.P.. D.T.M. & H. (Eng.), Medical Officer	2.9.27	... 14.9.45	Retired (medical grounds).
3. H. B. Cumpston, M.B., B.S. (Sydney) Medical Officer ...	11.6.40	... 14.11.45	Resigned.
4. Miss B. Eager, Senior Nursing Sister	8.6.28	... 6.8.45	Retired to pension.
5. " M. B. O. Fowlie, Sister Tutor ...	14.4.39	... 1.7.45	Resigned (leave with- out pay from 1.10.44. to 30.6.45).
6. " L.N. Knapp do. ...	22.7.39	... 2.10.45	Transferred to Malaya.
7. Mrs. M. K. Turnley, Nursing Sister	15.8.23	... 13.11.45	Retired to pension.
8. Miss M. T. McNay, do. ...	7.3.41	... 29.9.45	Resigned.
9. " M. Scott, do. ...	17.7.43	... 31.8.45	do.
10. " E. Norman, do. ...	6.10.43	... 21.3.45	do.
11. " J. D. Shirreff, do. ...	23.11.43	... 6.10.45	Reverted to temporary establishment.
12. " M. S. Bowles, do. ...	23.11.43	... 2.12.45	Resigned.
13. " J. K. A'Brook, do. ...	14.1.44	... 2.5.45	Reverted to temporary establishment.
14. " A. F. Johansen, do. ...	22.2.44	... 11.8.45	do.
15. " J. S. S. Whyte, do. ...	9.1.45	... 22.12.45	Resignation.
16. " K. W. Howard, Health Visitor	19.8.42	... 24.7.45	Returned to Malaya Service.
17. A. L. George, M.M., M.R.San. I., Senior Health Inspector	... 19.9.25	... 1.9.45	Transferred to Labour Department.

TABLE 3
PROMOTIONS AND REDESIGNATIONS OF APPOINTMENTS

Name	From	To	Effective date
P. A. T. Sneath, O.B.E., E.D., M.D., D.P.H. (Toronto), M.C.P.S. (Ontario) ...	... D.D.M.S.	... D.M.S.	... 1.6.45
S. Forrest, M.B., Ch. B. (Aberd.) ...	... A.D.M.S.	... D.D.M.S.	... 1.6.45
J. Williamson, M.B., Ch. B. (Edin.) ...	M.O.	S.M.O.	... *1.1.43
R. C. Speirs, O.B.E., M.D. (Edin.), D.T.M. (Liv.) ...	M.O.	S.M.O. (Kenya)...	31.5.45
A. McKenzie, M.B., B.S., L.M.S.S.A. (Lond.), D.T.M. & H. (Eng.) ...	{ M.O. S.M.O.	S.M.O. ... A.D.M.S. ...	*23.11.43 1.6.45
W. A. Young, D.M., B.Ch. (Oxon.), M.R.C.S., L.R.C.P., D.T.M. & H. (Eng.) ...	S.M.O.	Senior Specialist...	1.4.45
J. H. McDonald, M.B., Ch. B. (Aberd.), D.T.M. & H. (Eng.) ...	M.O.	S.M.O.	31.3.45
Miss K. P. Heckford, M.B.E. ...	Staff Matron	Matron-in-Chief...	1.1.45
Miss G. R. Ibbs ...	Asst. Matron	Matron, Grade I	1.1.45
Miss M. B. Craig ...	Sister and Health Visitor	Matron, Grade II	1.1.45
Miss M. A. Shelton ...	Senior Nursing Sister	Matron, Grade II	1.1.45

*Antedated.

Honours

Michael Mhando—African Hospital Assistant, Babati, Mbulu District. King's Certificate of Honour and Badge. General Notice No. 497 of 1945.

TABLE 4
BEDDAGE DISTRIBUTION

Classes Population per sq. mile	District and Province	Population 1941	Popn. Conc.	Actual Distribution of Government Hospital beds (a)						Defi- ciency per cent
				Sub-opti- mum bed require- ments	Group I	Group II	Group III	Group IV	Group V	
(1) 1: 100+	Kwimba, L.P.	199,850	107.3	999	—	—	—	—	—	100
(2) 2: 75—99	Moshi, N.P.	172,000	88.5	860	—	—	—	—	—	61
(3) 3: 50—74	Rungwe, S.H.P.	140,000	74.2	700	162	Kibongoto 85	Tukuyu 81	Muleza 96	—	85.6
(4)	Tanga, T.P. ...	99,000	65.0	495	—	Tanga 337	—	—	—	+ 16.0
(5)	Newale, S.P. ...	88,000	50.0	440	—	Arusha 126	—	—	—	6.0
(6) 4: 25—49	Arusha, N.P. ...	47,900	48.4	239	—	Dsm. Eur. H.	—	—	—	4.7
(7)	Uzaramo, E.P. ...	174,500	43.2	872	—	S.H.H. 52	—	—	—	—
				I.D.H. 150	—	—	—	—	—	—
(8)	Shinyanga, L.P.	156,870	42.3	784	—	—	Shinyanga 70	—	—	91
(9)	Mikindani, S.P.	63,000	41.8	315	—	—	Mikindani 42	—	—	—
(10)	Pangani, T.P.	29,360	37.2	146	—	—	Pangani 26	—	—	87
(11)	Bukoba, L.P.	324,194	33.4	1,620	—	Bukoba 100	—	—	—	82
(12)	Lindi, S.P. ...	133,000	28.0	665	—	Lindi 96	—	—	—	—
(13)	Singida, C.P. ...	220,000	26.8	1,100	—	Mwanza 219	—	—	—	250
(14)	Mwanza, L.P. ...	294,600	25.2	1,473	—	—	Singida 44	—	—	77
(15) 5: 10—24	Maswa, L.P. ...	198,000	22.1	990	—	—	Shanwa 43	—	—	85
(16)	Biharandulo, L.P.	117,200	21.4	586	—	—	Ngara 24	—	—	81
(17)	Korogwe, T.P.	175,514	20.8	877	—	—	Ngara 28	—	—	75
(18)	Kondoa, C.P.	115,100	19.4	575	—	—	Lishoto 55	—	—	152
(19)	Musoma, L.P.	217,210	19.4	1,086	—	—	Amani 4	—	—	—
(20)	Mbulu, N.P. ...	129,000	19.2	645	—	—	Lifundi 42	—	—	—
(21)	Morogoro, E.P.	148,000	19.2	740	—	Musoma 132	—	—	—	63
(22)	Pare, T.P. ...	58,250	19.1	291	—	Morogoro 174	—	—	—	92.4
(23)	Rufiji, E.P. ...	92,510	17.5	462	—	—	Kondoa 44	—	—	83
(24)	Njombe, S.H.P. ...	130,000	16.2	650	—	—	Mbulu 34	—	—	94.7
(25)	Masasi, S.P. ...	71,000	16.1	355	—	—	Ungangi 36	—	—	76.0
(26)	Bagamoyo, E.P. ...	51,418	13.8	257	—	—	Mafia 14	—	—	87.6
(27)	Kahama, W.P. ...	170,000	13.8	850	—	—	Uteete 26	—	—	91.3
(28)	Ukerewe, E.P. ...	63,500	11.9	317	—	—	Njombe 12	—	—	98.2
(29)	Mbeya, S.H.P. ...	128,500	11.6	642	—	—	Bagamoyo 40	—	—	9.5
(30)	Kiwa, S.P. ...	60,000	10.3	300	—	—	Kahama 50	—	—	84.5
(31) 6: under 10	Dodoma, C.P. ...	213,000	9.6	1,065	—	—	Kilosa 61	—	—	94.1
				—	—	—	Kiberege 8	—	—	94.1
				—	—	—	Kiwa 63	—	—	89
				—	—	—	Manyoni 22	—	—	79
				—	—	—	Mental Hosp. 208	—	—	79
				—	—	—	—	—	—	8.5
(32)	Kigoma, W.P.	... 238,472	9.5	1,192	—	—	—	—	—	31
(33)	Songea, S.P. ...	126,000	7.9	730	—	—	—	—	—	89.5
(34)	Tunduru, S.P.	52,000	7.0	260	—	—	—	—	—	95.9
(35)	Iringa, S.H.P.	91,134	6.5	455	—	—	Tunduru 28	—	—	89.2
(36)	Ufipa, W.P. ...	92,000	6.5	460	—	—	Malangali 23	—	—	84.4
(37)	Ulanga, E.P. ...	96,045	6.0	480	—	—	—	—	—	93.5
(38)	Tabora, W.P. ...	120,000	3.7	600	—	—	Sumbawanga 30	—	—	84.4
(39)	Chunya, S.H.P. ...	27,500	2.5	135	—	—	—	—	—	59
(40)	Liwale, S.P. ...	31,000	2.3	155	—	—	—	—	—	69.6
(41)	Masai, N.P. ...	37,500	1.6	187	—	—	—	—	—	89.0
	Totals ...	5,192,127	14.7	28,050	496	—	604	821	332	—
						—	—	—	250	4,009
						—	—	—	—	2,344

(a) Group designation—including temporary and semi-permanent beddage accommodation, general and special.

I.—Dar es Salaam—European and Seva Haji Hospitals.

II.—Medical Officer Station with European and Native Hospitals accommodation.

III.—Medical Officer Station with non-European Hospital accommodation.

TABLE 5
RESIDENT MEDICAL PRACTITIONERS

<i>Registered</i>	Government	Mission	Private	Employed	Totals
British 57 ... 9 ... 10 ... 2 ... 78					
Foreign 2 ... 6 ... 9 ... 4 ... 21					
<i>Licensed</i>					
British 42 ... - ... 4 ... - ... 46					
Foreign 1 ... 2 ... - ... 10 ... 13					
	Totals ... 102 ... 17 ... 23 ... 16 ... 158				
Ratios per cent 64 ... 11 ... 15 ... 10 ... 100					
*Ratios per 100,000 population 1.85 ... 0.31 ... 0.42 ... 0.28 ... 2.87					

*Based on population, all races—5,500,000.

TABLE 6
HOSPITAL BED DISTRIBUTION 1945

Groupings	Government	Mission	Private	Industry	Totals	Rate per 1,000 population (bc)
European 133(a) 133(c) ... 22.02						
Asian 97(a) 97 ... 2.08						
African 3,779 ... 2,344 ... 18 ... 272 ... 6,413 ... 1.18						
	Totals ... 4,009 ... 2,344 ... 18 ... 272 ... 6,643(c) ... 1.21					
Per cent distribution ... 60.2 ... 35.4 ... 0.3 ... 4.1 ... 100 ...						

(a) A proportion of these are interchangeable.

(b) For estimated population see Appendix I, section (3).

(c) This does not include refugees or hospital beds in refugee camps.

TABLE 7
FINANCIAL SUMMARY 1945

<i>Expenditure:</i>	Authorized Provision	Approximate Expenditure
Central Government:—	£	£
Ordinary recurrent, including additional provision by special warrants 356,998 ... 339,463		
Special, including additional provision by special warrants 52,280 ... 24,843		
	409,278 ...	364,306
Native Authorities 39,368 ... 35,926		
Colonial Development Fund "Sleeping Sickness Research", Tinde 1,850 ... 1,780		
Rehabilitation of Sick Demobilized Soldiers 12,850 ... —		
	54,068 ...	37,706
<i>Revenue:</i>	Estimated £	Receipts £
By hospital, laboratory and other fees 27,000 ... 22,981		
By dental fees 1,300 ... 1,326		
By reimbursement by Tanganyika Railways for Medical Services 3,000 ... 3,050		
	31,300 ...	27,357

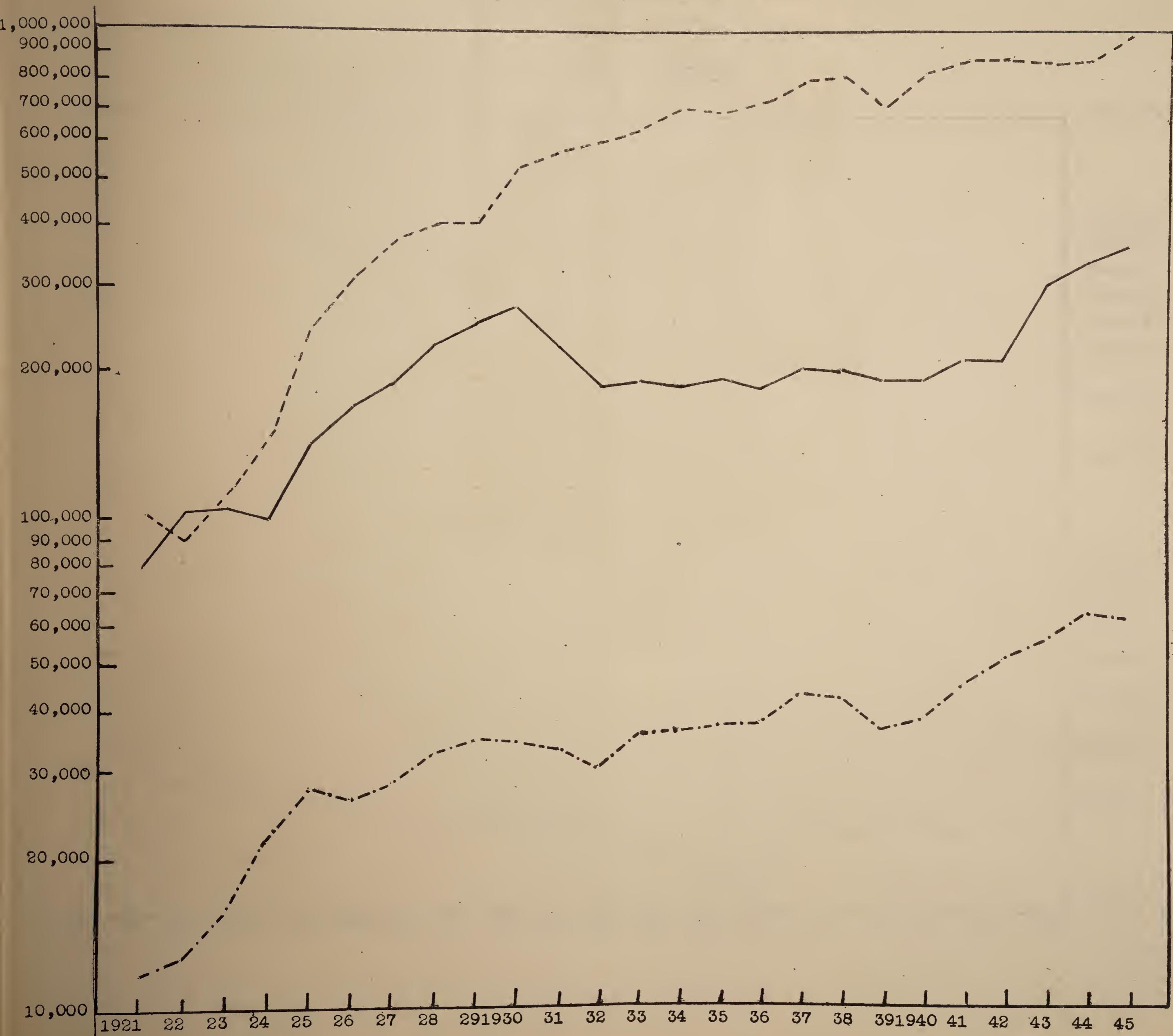
TABLE 8

EXPENDITURE ON MEDICAL SERVICES AND PATIENTS TREATED 1921-1945

Year	Expenditure £	CENTRAL GOVERNMENT		NATIVE AUTHORITY	
		In-patients	Out-patients	Expenditure £	Patients treated
1921	79,261	11,658	100,678	...	
1922	103,691	13,650	89,159	...	
1923	105,480	16,533	117,002	...	
1924	99,090	21,964	147,086	...	
1925	143,689	27,931	244,442	...	
1926	169,355	26,620	307,635	...	
1927	187,600	28,808	367,762	Not recorded	32,800
1928	227,018	32,794	372,764	16,830	141,300
1929	252,476	34,803	361,101	19,382	190,545
1930	274,715	34,810	393,783	16,702	352,423
1931	228,343	33,388	423,169	18,455	369,735
1932	187,493	30,751	479,517	11,830	374,614
1933	190,725	32,164	514,197	13,344	402,011
1934	187,777	35,803	546,445	15,388	451,520
1935	193,930	36,673	542,659	17,594	461,097
1936	185,735	38,021	598,016	18,428	529,954
1937	201,280	43,098	621,590	18,433	573,987
1938	203,609	42,526	641,193	17,399	789,915
1939	193,683	36,824	689,660	19,044	834,408
1940	193,321	38,791	814,036	21,399	943,743
1941	222,208	45,127	863,432	22,575	908,559
1942	224,792	51,852	870,838	22,578	1,195,890
1943	274,060	56,317	857,352	23,587	1,145,516
1944	332,705	63,152	857,953	28,279	1,311,316
1945	364,306	62,590	970,565	35,926	1,367,864

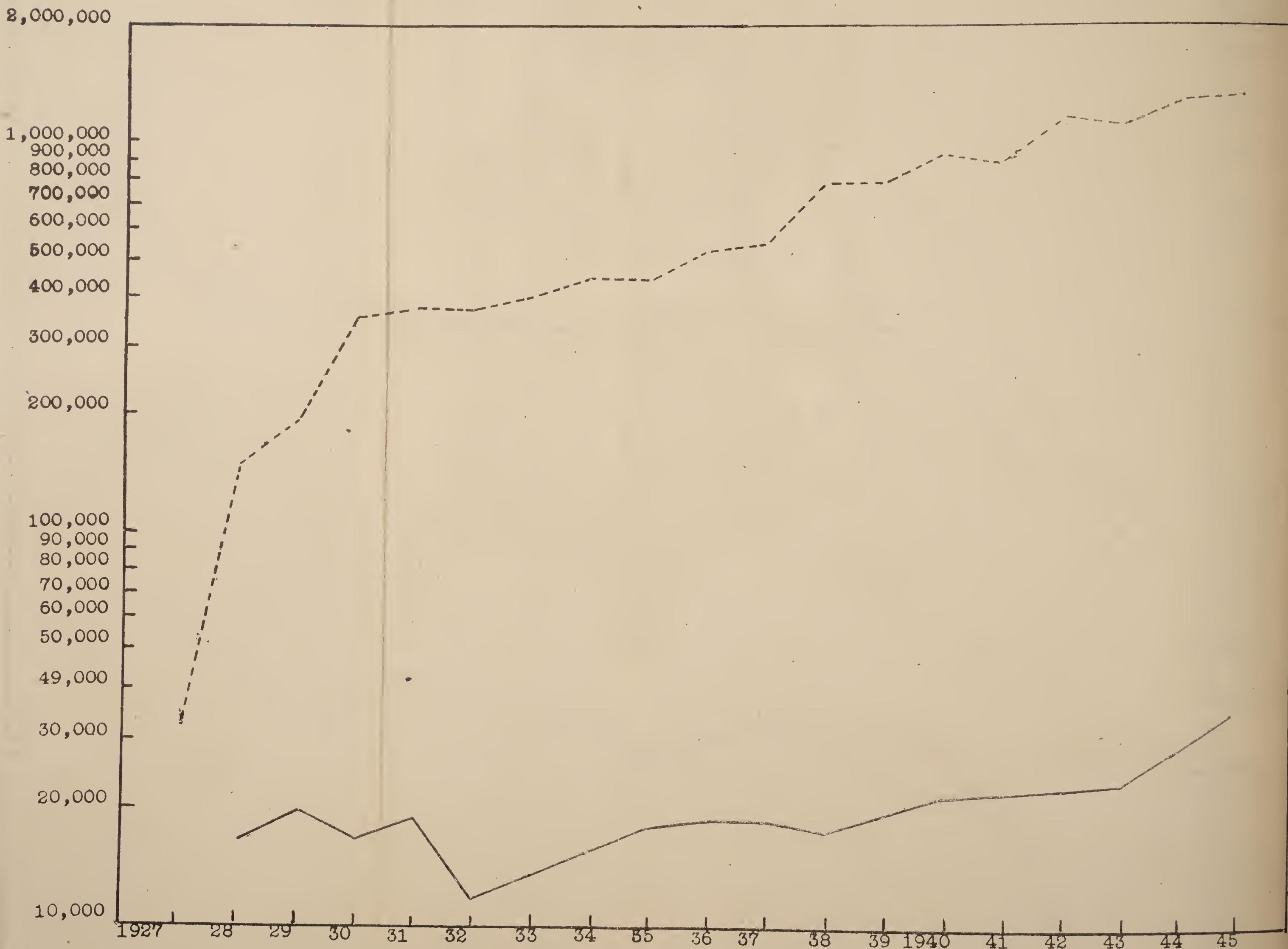
GOVERNMENT MEDICAL SERVICES
EXPENDITURE AND PATIENTS TREATED

Expenditure in £
In patients treated - - - - -
Out patients treated - - - - -



NATIVE AUTHORITY MEDICAL SERVICES
EXPENDITURE AND PATIENTS TREATED

Expenditure in £
Patients treated - - - - -



Appendix I

(1) GENERAL DISEASES:—

DISEASES AND DEATHS BY GROUPS (GOVERNMENT INSTITUTIONS ONLY), 1945. CLASSIFIED IN ACCORDANCE WITH MANUAL OF INTERNATIONAL LIST OF CAUSES OF DEATH, 1931 EDITION

	Cases	Deaths	Percentage of Group to Total Cases	Percentage of Group to Total Deaths
I. Infectious and Parasitic Diseases:				
(a) Blood Inoculation Group ...	110,042	232	12·11	8·50
(b) Intestinal and Excremental Group	58,623	290	6·46	10·62
(c) Surface Inoculation, etc.	140,632	451	15·49	16·50
(d) Other Infectious and Protozoal Diseases	7,985	103	0·88	3·78
Total	317,282	1,076	34·94	39·40
II. Cancer and other Tumours	582	48	0·06	1·75
III. Rheumatism, Diseases of Nutrition and of Endocrine Glands and other General Diseases	14,843	31	1·64	1·12
IV. Diseases of the Blood and Blood-forming Organs	7,944	16	0·87	0·59
V. Chronic Poisoning	138	—	0·01	0·00
VI. Diseases of the Nervous and Sense Organs	69,576	61	7·66	2·23
VII. Diseases of the Circulatory System	4,270	59	0·47	2·16
VIII. Diseases of the Respiratory System	105,468	461	11·61	16·88
IX. Diseases of the Digestive System	171,423	298	18·88	10·91
X. Non-Venereal Diseases of the Genito-urinary System and annexa	8,877	114	0·97	4·16
XI. Diseases of Pregnancy, Childbirth and the Puerperal state	1,437	56	0·16	2·04
XII. Diseases of the Skin, Cellular Tissue, Bones and Organs of Locomotion	146,694	140	16·15	5·12
XIII. Congenital malformations and Diseases of Early Infancy	811	18	0·09	0·65
XIV. Old Age	415	27	0·05	0·99
XV. Affections produced by External causes	52,438	277	5·78	10·14
XVI. Ill-defined Diseases	6,076	51	0·66	1·86
Total	908,274	2,733	100·00	100·00

(2) COMMUNICABLE DISEASES:—

Recorded cases of infectious and parasitic diseases numbered 317,282 (34·94 per cent of all cases) and accounted for 39·40 per cent, of the deaths in Government Institutions. They include:—

	Cases	Deaths
Blood Inoculation Group:		
Malaria	104,860	179
Blackwater fever	59	13
Relapsing fever (tick-borne)	4,813	33
Trypanosomiasis	546	154
Intestinal and Excremental Group:		
Dysentery	3,930	83
Enteric fever	188	39
Paratyphoid fever	27	3
Ankylostomiasis	22,669	151
Schistosomiasis	10,798	3
Surface Inoculation and Droplet Infection Group:		
Cerebro-Spinal meningitis	2,537	546
Tuberculosis:		
Pulmonary	3,814	134
Non-pulmonary	2,140	17
Smallpox	12,283	1,815
Yaws	69,090	16
Syphilis	40,319	17
Gonorrhoea	18,681	4

(3) VITAL STATISTICS:—

- (a) Estimated population (no census taken since 1931):—
Europeans 6,040, Asians 46,558, Africans 5,437,069.

Evacuees and Refugees in the Territory on 31st December 1945, not included above:—

Italians	...	...	2,865
Poles	...	...	6,635
Greeks	...	...	1,966
			<u>11,466</u>

- (b) Total births and birth rates: Not known.
(c) Total deaths and death rates: Not known.
(d) Infant mortality: Not known.

(4) SUMMARY OF WORK DONE AT HOSPITALS AND DISPENSARIES:—

	In-patients	Out-patients	Totals	Tribal Dispensaries
1944...	63,152	857,953	921,105	1,311,316
1945...	64,978	843,296	908,274	1,367,864

Under "Out-patients" first attendances only are recorded.

Mental Hospitals

Patients :	Dodoma	Lutindi	Total
Remaining from 1944	130	127	257
Admitted	130	56	186
Discharged	73	8	81
Transferred to Dodoma Mental Hospital	—	10	10
Transferred to Lutindi Mental Hospital	24	—	24
Died	8	22	30
Escaped	3	—	3
Remaining on 31st December 1945	152	143	295

Mental Patients in prison on 31st December 1945:

Under observation 4; Certified nil; Criminal Lunatic 25.

Dental Patients Treated

	Officials	Africans	H.M. Forces	Enemy Aliens and Refugees	Total
Dar es Salaam	2,542	1,439	178	41	4,200
Tanga (seven months only)	506	712	70	—	1,288
Total	3,048	2,151	248	41	5,488

(5) SUMMARY OF WORK DONE IN LABORATORIES:—

- (1) Pathological section includes Central Laboratory and Sewa Haji Clinical Laboratory, Dar es Salaam, and provincial laboratories at Moshi, Tanga, Tabora, Mwanza, Mbeya, Lindi and Dodoma. Specimens examined 145,000.
- (2) Vaccine Lymph Institute, Mpwapwa. This institute was closed during the year. The Laboratory Superintendent was on sick leave after a protracted illness. Lymph was accordingly purchased from Nairobi until the end of the year.
- (3) Chemical Unit—3,119 samples were examined.

(6) NEW LEGISLATION:—

- (i) An ordinance to enable control to be exercised over Hotels for the purpose of enforcing therein reasonable standards of cleanliness, sanitation and efficient service. Ordinance No. 11 of 1945.
- (ii) The Yellow Fever Ordinance. Declaration of Balovale District of Northern Rhodesia as endemic area. Government Notice No. 60 of 1945.
- (iii) The Mental Hospitals (Establishment: Msasani) Order, 1945. Government Notice No. 106 of 1945.

(6) NEW LEGISLATION :—(contd.)

- (iv) The Mental Hospitals (Msasani—Disestablishment) Order, 1945. Government Notice No. 126 of 1945.
- (v) Anterior Poliomyelitis declared as Infectious Disease for the purpose of Infectious Diseases Ordinance. Government Notice No. 253 of 1945.
- (vi) The Defence (Compulsory Treatment of Venereal Diseases) Regulations, 1945. Government Notice No. 53 of 1945.

(7) PUBLICATIONS :—

The following publications were issued during the year :—

Medical Pamphlet No. 41 "Maradhi Yanayotoka kwa Uasharati" (Venereal Diseases).
"Penicillin—Indications for its use and Methods of Administration."
"Health of Prisoners" in English and Kiswahili.

COST OF MEDICAL SERVICES

Charts II and III and Table 8 show the trend of the amount of work performed and the cost of medical services during the British regime in Tanganyika. The charts are drawn on an arithrolog scale and thus the slope of the line indicates the rate of change involved.

Chart II shows the annual expenditure on Government medical services and the annual number of in- and out-patients treated in Government institutions. It will be seen that, until 1930, there was a steady increase of expenditure which was roughly paralleled by the number of patients treated. Then, following the period of general financial depression, expenditure was drastically reduced and did not again achieve an appreciable upward trend until 1942. In spite of this, apart from a slight decrease until 1932 shown mainly in the numbers of in-patients admitted, the general upward trend of patients treated has continued, though at a lower rate: since the beginning of the war in 1939, the number of in- and out-patients has risen very rapidly and is now nearly double that for 1930. As it was not until 1943 that expenditure rose above the 1930 level, it may well be realized how much additional work has been undertaken without the provision of a balanced increase in the essential purchasable facilities necessary for the work. The chart shows the large amount of the slack still to be taken up, especially as a large proportion of the increased expenditure for 1942 to 1945 is absorbed by rising costs.

Turning to the Native Authorities medical service, which was instituted in 1927, it may be seen from Chart III that expenditure has barely risen above the 1939 level until 1943. The number of patients treated showed a rapid upward trend until 1930, by which time it may be considered the service had become established, since the work has increased at a steady rate. Expenditure has by no means kept pace with this. Although the high expenditure of the first years was probably partially taken up by capital works, there is no doubt that the increase in the services rendered must have been at the expense of their professional quality.

Appendix III

**INCIDENCE OF MALARIA UNDER TREATMENT IN THE EUROPEAN
HOSPITAL, DAR ES SALAAM**

A limited survey of the prevalence of malaria amongst persons admitted as in-patients in the European Hospital, Dar es Salaam, was undertaken. Two classes in the community served were selected. Class A was comprised of 164 persons under review over a period of 38 consecutive weeks up to the end of the year; Class B of 83 persons admitted as in-patients over the 52 weeks of the year.

	CLASSES			
	European Civilians	European Military	Asian	Total
<i>Group A:</i>				
Total admissions	... 87 ...	53 ...	24 ...	164
Percentage of total	... 53 ...	32 ...	15 ...	100
Total malaria cases	... 47 ...	39 ...	11 ...	97
Percentage of Class	... 54 ...	73 ...	46 ...	59
<i>Group B:</i>				
Total admissions	... 59 ...	— ...	24 ...	83
Percentage of total	... 71 ...	— ...	29 ...	100
Total malaria cases	... 20 ...	— ...	3 ...	23
Percentage of Class	... 34 ...	— ...	12·5 ...	28

These figures provide nothing but a random sample and do not necessarily represent persons who have been exposed to identical risk. The point at issue is that Tanganyika is manifestly a malarious Territory and a similar qualification may be descriptive of Dar es Salaam. In these circumstances the expectation is that persons from abroad will exercise the common personal protective and suppressive measures in avoidance of this particular disease. The prevalence of the disease amongst these particular classes and groups of in-patients presents an indication of the failure of observance or the failure of such measures to prevent acute clinical attacks of malaria in two small groups.

No useful purpose can be served at this point in speculating upon the group differences. The fact remains that amongst a section of the population who should have a reasonable familiarity with publicized information about malaria, there is here some reason to suspect that from ignorance, indolence, misguided information, or a variety of personal idiosyncrasies, full use cannot have been made of the defensive measures known before, and shown to be outstandingly effective during the recent war. Until financial and practical considerations make feasible the local elimination of the vectors, common sense dictates the observance of personal defensive measures. The problem of persuading knowledgeable persons to attempt to protect themselves from illness remains for solution. The difficulty of demonstrating to the less knowledgeable elements in the Asian and African communities the need for a personal concern with prevention is in no way lightened, should this example be taken as a criterion.

Assuming a period of ten days is lost from work by actual illness and convalescence for each case of malaria, the loss of 1,200 man-days in this small group imposes a burden which—if only half the cases could have been avoided—must be of some economic significance in any labour market.

